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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/004,370	11/01/2001	Jung-Lin Pan	I-2-187.1US	7318
24374	7590	02/08/2005	EXAMINER	
VOLPE AND KOENIG, P.C. DEPT. ICC UNITED PLAZA, SUITE 1600 30 SOUTH 17TH STREET PHILADELPHIA, PA 19103			JOSEPH, JAISON	
			ART UNIT	PAPER NUMBER
			2634	

DATE MAILED: 02/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/004,370

Applicant(s)

PAN ET AL.

Examiner

Jaison Joseph

Art Unit

2634

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 2 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 01 November 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☒ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1 - 28 is/are pending in the application.
- 4a) Of the above claim(s) 5-11 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-4 and 12-28 is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☒ Claim(s) 1-4 and 12-28 is/are objected to.
- 8) ☒ Claim(s) 5-11 are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Election/Restrictions***

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1 – 4 and 12 – 28, drawn to estimating data received from a plurality of data signals, classified in class 375, subclass 340.
- II. Claims 5 – 11, drawn to reducing error in solving a matrix linear equation, classified in class 375, subclass 346.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

The inventions are distinct, each from the other because of the following reasons:

During a telephone conversation with Jeffrey M Glabicki on 02/04/05 a provisional election was made with traverse to prosecute the invention of estimating data received from a plurality of data signals, claims 1 – 4 and 10 – 28. Affirmation of this election must be made by applicant in replying to this Office action. Claims 5 – 9 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

***Specification***

The abstract of the disclosure is objected to because in abstract, line 6 and 8, recite “fourier transform” should have been “Fourier Transform”. Correction is required. See MPEP § 608.01(b).

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The disclosure is objected to because of the following informalities:

In the specification, paragraph 7, line 1,1 recites "fast fourier transform" should have been "Fast Fourier Transform".

In the specification, paragraph 9, lines 6 and 8, recite "fourier transform" should have been "Fourier Transform".

Similar scenarios exist in paragraph 27, line 7.

In the specification, paragraph 36, lines 5, recite "block-fourier transform" should have been "Block-Fourier Transform".

Appropriate correction is required.

### ***Claim Objections***

Claims 1 – 4 and 12 – 28 are objected to because of the following informalities:

In claim 1, line 8 and 9 recite "fourier transform" should have been "Fourier Transform"

Similar scenarios exist in claim 2, line 1, claim 3, line 1, claim 4, line 1, claim 12, line 7 and 9, claim 13, line 1, claim 21, line 7 and 9, and claim 22, line 1.

Appropriate correction is required.

Claims 2, 13, and 22 are objected to because of the following informalities:

In claim 2, line 2 recites "fast fourier transform" should have been "Fast Fourier Transform".

Similar scenarios exist in claim 13, line 2, claim 22, line 2.

Appropriate correction is required.

Claims 14 – 20 and 23 – 28 are objected because of these claims depend on an objected claim.

***Allowable Subject Matter***

Claims 1 – 4 and 12 – 28 are allowable over prior art of record.

This application is in condition for allowance except for the following formal matters:

This application is in condition for allowance except those objection explained in above paragraphs and the applicant is required to cancel those non-elected claims 5 – 11 in response to this office action.

Prosecution on the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

A shortened statutory period for reply to this action is set to expire **TWO MONTHS** from the mailing date of this letter.


***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jaison Joseph whose telephone number is (571) 272-6041. The examiner can normally be reached on M-F 8:30 - 5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Chin can be reached on (571) 272-3056. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jaison Joseph  
02/07/2005



**STEPHEN CHIN**  
**SUPERVISORY PATENT EXAMINER**  
**TECHNOLOGY CENTER 2800**